

Six New Southern African Butterflies

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(Nos.. 36-41)

LYCAENIDAE

This butterfly, which has been known to the writer for many years, occurs locally over a fair extent of country from about 40 to 60 miles to the north of Cape Town. It is allied to both *L. oreas* Tite and *L. australis* Tite, being closer to the latter, but certain distinctive features, especially on the underside, serve to separate it readily from both these insects. Its distinguishing characters are at once apparent throughout its range and, in relation to *L. australis* particularly, a significant factor is its earlier and less extended flight-period.

Lepidochrysops titei spec. nov.

Forewings tend to be shorter in relation to their depth than in, at least, *L. oreas*, while the average size of specimens is about mid-way between that of *oreas* and *australis*—although some specimens of *L. titei* are certainly considerably larger than others. The upperside (when males, anyway, are compared) is of a somewhat brighter and slightly more glistening violaceous-blue colour than in the other two insects. The underside has its general pattern more neatly defined, owing mainly to the white marking standing out more clearly and sharply against the background.

Male (Upperside)

Blackish borders variable in width in different specimens, but the more usual width (and that in the holotype) about 2 mm. in forewing, and frequently a little greater in hindwing, in which the border is normally less dense and contains dark, blue-edged (and often partly whitish-edged) spots. Cilia of all wings with broad white spaces which are very clearly separated by blackish divisions at the ends of veins.

Underside

Ground-colour as a whole rather dark brownish-grey (tending to become less greyish in time, in cabinet specimens), with white dusting, to a variable extent in individual specimens, over the inner portion of the forewing, and which frequently occurs pronouncedly on some of the veins. Although indi-

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LEGEND OF FIGURES

Figs. 1-2. *Lepidochrysops titei* spec. nov.: ♂ and ♀ paratypes (upperside and underside) (Porselein Berg, C.P.).

Figs. 3-4. *Leptomyrina henningi* spec. nov.: ♂ and ♀ paratypes (upperside and underside) (Strubens Valley, Tvl. and Johannesburg, respectively).

Figs. 5-6. *Epamera mimosae pamela* subsp. nov.: ♂ Holotype and ♀ Allotype (upperside and underside).

Figs. 7-8. *Poecilmitis bamptoni* spec. nov.: ♂ Holotype and ♀ Allotype (upperside and underside).

Figs. 9-10. *Thestor pringlei* spec. nov.: ♂ Holotype and ♀ Allotype (upperside and underside).

Figs. 11-12. *Tsitana tulbagha kaplani* subsp. nov.: ♂ Holotype and ♀ Allotype (upperside and underside).

Figures approximately 0.85 times natural size, with some discrepancy in relative sizes. Colours not in all cases precisely as in nature.

vidually variable, the space between the forewing discal spots and white chevrons adjoining the dark submarginal marking is, as a rule, more as in *australis*, and thus greater than in *oreas*. There is virtually no solid white marking in the inner half of the hindwing apart from the conspicuous white bordering of the dark marking. Cilia much as on upperside.

Length of forewing: 16.5-19.5 mm. (the latter, in holotype). An abnormally small male has a forewing length of only 14.5 mm.

Female (Upperside)

Resembling that of *L. australis* and as variable as regards the suppression or development of the dark discal spotting in the forewing, and that of the dark discal band of the hindwing, basad of the violaceous-blue lunules which are more or less parallel with the marginal spotting of the wing. In the holotype the former is well developed and the discal band of the hindwing partially so. Apart from one example, no specimens under examination have had the dark distal border excessively broad, and in the female figured and one other paratype it is relatively narrow for females of this group. An unusually small paratype has a very diffused band of dark scaling, in the forewing, between the discal spots and distal border. Cilia as in male.

Underside

Agreeing with that of male.

Length of forewing: 18.75-19.25 mm. (the latter, that of holotype). An abnormally small female has a forewing measurement of only 14.5 mm.

The body and ancillary parts are practically as in the other two specimens.

♂ Holotype, WESTERN CAPE PROVINCE: Porselein Berg, 13.x.1964 (C.G.C.D.); British Museum Reg. No. Rh.18652.

♀ Allotype, W. CAPE PROVINCE: data as for holotype, 13.x.1964 (C.G.C.D.); British Museum Reg. No. Rh.18653.

Paratypes in Coll. British Museum (Nat. Hist.); as holotype, 25.x.1963, one ♂; 3.x.1964, four ♂♂; 13.x.1964, three ♂♂; British Museum Reg. Nos. Rh.18664-71.

Paratypes in author's coll.: Kanon Berg, Malmesbury Division, C.P., 13.ix.1946, one ♂; 28.ix.1973, three ♂♂; as holotype, 3.x.64, one ♂, one ♀; 27.ix.69, two ♂♂; 11.x.73, one ♀; 10.x.74, two ♂♂, one ♀; N. end Riebeeck Kasteel Mtns., C.P., 3.xi.66, one ♂ (C.G.C.D.).

Paratypes in Coll. Transvaal Museum: as holotype, 11.x.73, one ♂; 10.x.74, one ♂ (C.G.C.D.).

Paratype in Coll. National Museum of Rhodesia, Bulawayo: 10.x.74, one ♂ (C.G.C.D.).

Paratypes in Coll. Mrs. J. V. Sipser: as holotype, 27.ix.69, four ♂♂ (J.V.S.).

Paratypes in Coll. Dr. Jeffrey Kaplan: as holotype, 10.x.74, one ♂ (J.K.).

Several of the male paratypes have some additional dark marking on the upperside of the forewing in the form of from

one up to six postmedian spots which vary in size and clarity; and one example has a diffused discal spot slightly beyond the dark discocellular marking on the hindwing upperside. In one female paratype the expansion, inwards, of the dark borders of the upperside is very pronounced, with a corresponding great reduction of the blue areas of the wings. Occasional male specimens have had the series of white chevrons on the hindwing underside noticeably thickened, accompanied by expansion of some of the other white marking of the underside.

The genitalia of several males of *L. titei* have been compared with those of males of *L. australis*. The valves have been found to be very similar (with the normal individual variation of the hooked distal portion usual in this group of *Lepidochrysops*). In these preparations, the valves of *titei*, allowing for the disparity in size of specimens, have been relatively slightly wider than in *australis*. The distal portion of the aedeagus, in the lateral view, has, in *titei*, been decidedly convex in outline dorsally (after an initial "dip" anteriorly), but comparatively straight ventrally; whereas in *australis* it has been partly noticeably convex ventrally, as well as dorsally. In *titei*, the distal ends of the lateral sclerites, when viewed at right angles to the main surface, have tended to be slightly more acute in form than in *australis*, and with the outer edge inclined to be a little straighter in relation to the more convex edge, than in the latter species.

It is believed that *L. titei* has a considerably wider distribution than is suggested by the data for the type material. Specimens of a blue *Lepidochrysops* from above the Huis River Pass, west of Calitzdorp, resemble it in size and wing-shape and other features, but do have a lighter ground-colour on the underside and possibly show some other slight differences. Their flight-period was found to be equally early. Many years ago a female of the present *L. titei* was observed when ovipositing on a species of *Selago* (Selaginaceae) on the hill slightly south of Moorreesburg; but it is believed that the species also occurs quite well north of this point. Like those of the allied species, the males habitually fly about hill-summits during the warmer hours of the day.

The opportunity has been taken of naming this fine species after Mr. G. E. Tite, who has undertaken so much original research on African Lycaenid butterflies, including numerous *Lepidochrysops*, and whose kindly help and co-operation over the years has always been highly valued by the present writer.

Leptomyrina (*Gonatomyrina*) **henningi** spec. nov.

This insect seems to have been confused previously with either *L. lara* (L.) or *L. gorgias* (Stoll). It is in fact closer to the latter but can be separated easily by means of several characters, as given in the description below, and, after consideration of all the relevant factors, it is believed that it could best be accorded specific status. Nevertheless, the present insect appears to be closely related to *Leptomyrina lara sobrina*

Talbot (1935, *Entomologist's mon. Mag.*, **71**: 121), and perhaps more closely than to *L. gorgias*. In the light of our better knowledge of the group, today, *sobrina* can be concluded to be specifically distinct from *lara*, and most probably from *gorgias* also; and this does leave the possibility of *henningi* ultimately proving to be a subspecies of *sobrina*. Mr. W. H. Henning and his sons Graham and Stephen, of Florida, Transvaal, are the ones to have noticed the differences which are present in this butterfly and to have helped with the necessary material for its study. Nevertheless, Mr. W. Teare of Benoni, Transvaal, had also felt that the butterfly did not answer to either *lara* or *gorgias*.

As mentioned above, this taxon is closer to *L. gorgias* than to *L. lara*—with the wing shape in the male similar to that of the former, the forewings being rather acutely angled towards the apex and the hindwings well produced at the angle-angle and having a strong projection at the end of vein 1b. Ground-colour of the upperside rather warm brown in both sexes, the margins and apex of forewing, and a narrow distal-marginal portion of hindwing, inclining to fuscous. (Some male specimens, such as the holotype, may show traces of lighter pigmentation in the forewing, discally, and have the long hairs over a broad innermarginal area of the hindwing pronouncedly greyish.)

Male (Upperside)

A darker suffusion basally, with a rather lavender-grey to light violaceous shifting lustre over and beyond this area—the sheen neither as light nor as extensive as in *gorgias*. Post-discal light markings not present in forewing—apart from the barest trace of them in occasional specimens.

Underside

If allowance is made for individual variation in specimens there appears to be no constant difference in underside markings. The main discal and postdiscal marking of the hindwing is possibly more frequently, more heavily developed, in *gorgias* than in *henningi*.

Length of forewing: 13.25-16.25 mm. (15.75 mm., in holotype).

Female

Remarks relating to the male apply in general also to the female. Basal sheen on upperside not necessarily less than in the female of *gorgias*, in which it is not as pronounced as in the male.

Length of forewing: 14.5-18.5 mm. (18.5 mm., in allotype).

♂ Holotype, SOUTH WEST AFRICA: Kombat, 15.xi.1975 (S. Braine); British Museum Reg. No. Rh.18654.

♀ Allotype, S.W. AFRICA: data as for holotype, 27.i.1974 (J. Braine); British Museum Reg. No. Rh.18655.

(The above specimens were made available through the courtesy of Messrs. J. and S. Braine.)

Paratypes in author's coll.: as holotype, 30.xii.1974, three

♀ ♀; 31.xii.1974, one ♂, one ♀; 2.i.1975, one ♀ (most of these specimens bred by Mr. Braine). Johannesburg, Transvaal, 2.xii.1972, three ♂ ♂, one ♀ (Mrs. J. V. Sipser).

Paratypes in Coll. Transvaal Museum: as holotype, 17.xi.1975, one ♂; i.1974, one ♀ (S. Braine).

Paratypes provisionally in Henning Coll.: as holotype, 25.i.1974, one ♀; 27.i.1974, one ♀; 30.i.1974, one ♂; 20.ii.1974, one ♂, two ♀ ♀ (all specimens bred by Mr. Braine). Gabarone, Botswana, 25.i.1974, one ♂; 28.i.1974, one ♂, one ♀ (Ivan Bampton). Gutu, nr. Fort Victoria, Rhodesia, xii.1975, one ♀ (bred by Mr. Bampton). Strubens Valley, nr. Florida, Transvaal, 17.xi.1963, one ♂; 11.x.1964, one ♂ (G. A. Henning); 7.x.1963, one ♂; 26.vii.1964, one ♂ (S. F. Henning); 23.ii.1974, one ♀; 7.iii.1974, one ♂, one ♀; 16.iv.1974, one ♂ (all bred by Mr. Bampton). Florida, Tvl., 2.vi.1966, one ♀ (G.A.H.); 12.xii.1974, one ♀ (I.B.). Witpoortjie, Tvl., 26.x.1975, one ♂ (I.B.). Silkaatsnek, Tvl., 8.ix.1973, one ♂ (G. A. Henning). Potchefstroom, Tvl., 20.ix.1970, one ♀; 31.x.1970, one ♀; 16.xii.1973, two ♂ ♂; 16.xii.1974, one ♂ (G.A.H.); 23.x.1973, three ♂ ♂, two ♀ ♀; 16.xii.1973, four ♂ ♂, one ♀; 5.ii.1974, one ♀ (S.F.H.); 12.ii.1974, one ♂ (I.B.). Sandown, Johannesburg, Tvl., 10.xi.1963, one ♀ (W.H.H.). Honeydew Vlei, Tvl., 8.iii.1970, one ♂ (W.H.H.). King's Kloof, Krugersdorp, Tvl., 27.i.1973, one ♀ (S.F.H.). Rustenburg, Tvl., 3.viii.1974, one ♀ (Dr. M. C. Williams). Hartebeestpoort Dam, Tvl., 17.vii.1966, one ♀ (S.F.H.). Rosslyn, Pretoria, Tvl., one ♂ (W.H.H.). Rust der Winter, 30 miles N. of Pretoria, Tvl., 2.ix.1974, one ♀ (G.A.H.). Pietersburg, Tvl., 16.xi.1973, one ♂ (I.B.). At least one pair of these paratypes will be presented to the Allyn Museum of Entomology, Sarasota, Florida, U.S.A.

Paratypes in Coll. S. Braine: as holotype, 23.xi.1973, one ♂; i.1974, two ♂ ♂, two ♀ ♀; date omitted, one ♀ (all bred by Mr. S. Braine).

Paratypes (all from Rhodesia) in Coll. National Museum of Rhodesia, Bulawayo: four miles S. of Gwanda, 6.iii.1967, one ♂. Balla Balla, 5.ii.1974, one ♂ (E. Pinhey - F. de Moor). Filabusi, vi.1956, one ♂ (Maj. N. S. Vissian). Zimbabwe, 14.v.1962, one ♂ (A. J. Duke). Turk Mine, 1956, one ♀. Odsi River, 26.iv.1936, one ♀ (P. A. Sheppard). Salisbury, 4.v.1966, one ♀ (A. J. Duke). Ntoke, iii.1944, one ♀ (Mr. and Mrs. B. C. Cox). Dr. Elliot Pinhey kindly made this Rhodesian material available for examination.

Judging by Talbot's brief description of *sobrina*, his insect differs from *henningi*, on the upperside, in the basal sheen being absent, the colour of the wings being fuscous-brown and in the hindwing having no greyish-white postdiscal spot in area 1c. One concludes from his remarks that Talbot, in the course of his work, probably considered *gorgias* to represent *lara*, and thus compared *sobrina* with the former insect instead of with true *lara*.

More than one dissection, in each case, of the male genitalia of *L. (G.) lara*, *gorgias* and *henningi* have been

compared carefully, and any small differences which have been present seem only to have been of such a nature as would fall within the normal range of individual variation in different specimens. Very clear and accurate line drawings of the male genitalia of *Iara* have been given by Stempffer in "The Genera of the African Lycaenidae (Lepidoptera: Rhopalocera)", *Bull. Br. Mus. nat. Hist. (Ent.)*, Suppl. 10: 170, fig. 152.

This insect has a decidedly wide range, occurring as it does well to the north in South West Africa, and in the Transvaal and in Rhodesia—while it is known to occur in Botswana, also. Specimens have been reared by Mr. Bampton on *Cotyledon orbiculata* L. and *C. leucophylla* C. A. Smith (Crassulaceae), the larvae living within the thick fleshy leaves of these succulent plants. (It has appeared subsequently that only one species of *Cotyledon* is represented in this case, the first being the better known name.)

Epamera mimosae pamelae subsp. nov.

This beautiful insect, with its lighter blue upperside and more plainly marked underside, differs so noticeably from *Epamera mimosae mimosae* (Trimen) from the Eastern Cape Province that it might be considered to represent a separate species. However, Monsieur H. Stempffer has treated as subspecies of *E. mimosae* certain other taxa which in some cases do not differ less either in facies or the male genitalia from the nominate race than does the present butterfly and it seems preferable on this account to follow this authority, for the present, in this case also. While the description is based on South West African specimens, it must be emphasised that material from the Transvaal shows very little difference and can, it is believed, be considered to represent no more than a possible form of *pamelae*. Although *pamelae* is certainly closer to *E. mimosae rhodosense* Stempffer than to nominate *mimosae*, a direct comparison with the nominate race has been made in the following description in order to clarify better its principal features.

Male (Upperside)

Blue lighter than in *E. mimosae mimosae* (Trimen) and without the slightest suggestion of any violaceous tone; demarkation of main black portions in all wings much the same and the sex-brand in hindwing similar, but the black marking at or near anal-angle less prominently developed than in nominate race.

Underside

Light grey, without the somewhat brownish tint of nominate *mimosae* and of a far more uniform shade over the entire surface of the wings. The lines thinner and as a whole less irregular or dentate than in nominate *mimosae*, and sub-basal line of hindwing either entirely absent or only in the form of a short streak near costa. Postdiscal line of hindwing less curved (almost straight, in fact, apart from the small undulations along most of its length); spotting at or near anal-angle reduced in size.

Length of forewing: 13.25-15.5 mm. (the former measurement, that of holotype—a small specimen).

Female

Essential characters as those of male. In the allotype the lines on the underside are broader on the whole and more prominent than in the holotype, and of a noticeably more orange tone—but these features can be variable in either sex.

Length of forewing: 14.75-16.75 mm. (the former, that of allotype).

Compared with specimens of *E. mimosae rhodosense* which have been available for study, the male sex has differed in having the hindwings more elongated towards the anal-angle and in the purer blue of the upperside (a slight suggestion of a violaceous tint being apparent in the above examples of *rhodosense*—and in two females, also, which have been seen); and in both sexes the discal and postdiscal lines have, in all wings, been less widely separated and the discal line less irregular, in *pamelae*.

♂ Holotype, SOUTH WEST AFRICA: Kombat, 20.ix.1974 (J. Braine); British Museum Reg. No. Rh.18656.

♀ Allotype, S.W. AFRICA: data as for holotype, from larva, emerged 5.i.1974 (J. Bampton); British Museum Reg. No. Rh.18657.

Paratypes in Coll. Transvaal Museum: data as for holotype, 20.viii.1974, one ♂ (J. Braine); 5.i.1974, one ♀ (I. Bampton).

Paratypes in Coll. National Museum of Rhodesia, Bulawayo: as holotype, 30.ix.1974, one ♂ (J. Braine); 16.i.1974, one ♀ (I. Bampton).

Paratypes in Coll. W. H. Henning: as holotype, 9.i.1974, one ♂ (I. Bampton); 23.ix.1974, one ♂ (J. Braine); 27.ix.1974, one ♀ (J. Braine); 24.viii.1974, 29.viii.1974, 30.viii.1974, 7.ix.1974 and 22.ix.1974, five ♂♂ (I.B. or J.B.); 20.ii.1974, 2.iii.1974, 9.iii.1974, vi.1974, 15.viii.1974, 5.ix.1974, 7.ix.1974 and 13.ix.1974, eight ♀♀ (I.B. or J.B.).

Some reference to the male genitalia is desirable. Stempffer, when describing *Epamera mimosae rhodosense* in his "Révision des genres appartenant au groupe des *Iolaus* (Lep. Lycaenidae)" (*Bull. Inst. fr. noire*, T.21, Sér. A: 237 (1959)), stated that the male genitalia were similar to those of *mimosae haemus* Talbot and *mimosae berbera* Beth.-Baker, the genitalia of *haemus* being figured on the previous page (and those of *mimosae mimosae* on p. 234 of this work). It has been found that the valves of *pamelae* agree well in outline with those of *haemus* as figured by Stempffer, and have the upper distal end well produced and angled (but with a blunt "corner"), instead of being broadly rounded as in *mimosae mimosae*. Males of *rhodosense* and *pamelae* which have been dissected have provided complete confirmation of the similarity of the valves, in their own case, and the difference in comparison with dissected specimens of *mimosae mimosae*.

E. mimosae pamelae was caught in South West Africa, a good many years ago, by the late K. M. Pennington and, later, in 1971, by Dr. Douglas Kroon. Although Dr. Kroon fully

appreciated the differences in this insect and remarked on them, no one, unfortunately, took up the matter on his behalf at that time. The recent specimens, which were obtained by Messrs. Braine and Bampton, were submitted to the writer by Mr. W. H. Henning. Mr. Bampton reared a few of them from eggs or larvae found in Mr. Braine's garden, in Kombat, on the parasitic plant *Loranthus*, nearly all the members of the *Iolais* group, in the broad sense, being known to use species of *Loranthus* as their foodplants. Mr. Henning suggested the present butterfly being named after Mrs. Pamela Braine, in recognition of her interest in the butterflies of her district, and the *Epamera* in particular. The writer is indebted to Dr. Elliot Pinhey of the National Museum of Rhodesia for the loan of specimens of *E. mimosae rhodosense*.

Poecilmitis bamptoni spec. nov.

Although at first sight this strikingly beautiful member of the *Poecilmitis thysbe* (L.) group appears to be very distinct from *thysbe* itself, there is some little doubt as to its true status owing to the existence of what might appear to be transitional forms in various localities further down the coast, southwards of Hondeklip Bay, in which locality the butterfly concerned occurs in profusion. It is nevertheless so constant in its principal characters and so different from *thysbe* proper—the male especially so—that, in the light of similar situations in which it is known that separate species are involved, there seem very good grounds for believing that speciation has in fact taken place in its own case. Subspecific status would not appear to be correct under the circumstances.

The male is at once separable from that of *P. thysbe* by the more extensive, solid silvery-blue in all wings (more markedly and consistently so in the forewings), the small but distinct white spaces in the cilia of the forewings, without any orange marking either in the cilia or on the adjacent wing-surface, and by the more even distal margins in which there is less obvious "elbowing". On the hindwing underside characteristic features are also apparent, with some of the silvery lituræ very prominent and well defined and others tending to be more blurred, but these markings in general contrasting exceptionally well with the background of the wing, which is not as finely variegated as that of typical *thysbe* (as distinct from f. *osbecki* Aurivillius); although there is a large patch of a darker shade before the middle of the wing and another in its outer portion rather towards the upper angle, as well as similar darkening towards the anal-angle. There is sometimes a suggestion of an olivaceous tone on the hindwing underside and on the darker submarginal area of the forewing underside.

(To be continued)

THE LARGE TORTOISESHELL (NYMPHALIS POLYCHLOROS L.) IN KENT IN 1976. — On 14th September, I discovered on my front door a female *N. polychloros*. It is in perfect condition and has already gone into hibernation. — G. H. YODEN, 18 Castle Avenue, Dover, 15.ix.1976.